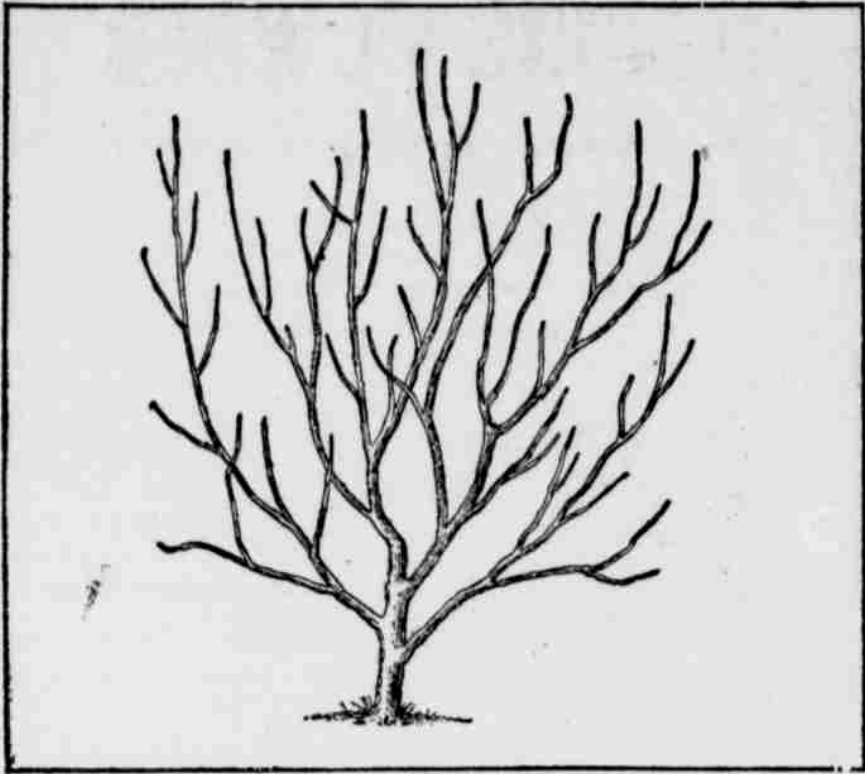


## TWO IMPORTANT REQUISITES IN PROFITABLE PEAR ORCHARD

Objects to be Obtained in Pruning and Training are to  
Secure Symmetrical, Evenly Balanced Heads;  
Admission of Sunlight and Air and  
Foliage for Shade.



Intermediate or Natural Form.

(By G. B. BRACKETT, Pomologist, United States Department of Agriculture.)

Pruning and training are important requisites in the successful management of a pear orchard. The objects to be attained are: (1) Symmetrical, evenly balanced heads; (2) the admission of sunlight and free circulation of air into all parts of the tree tops; and (3) the maintenance of sufficient foliage to protect the trunks and branches from the intense heat of the sun's rays, which would otherwise be likely to scald and injure both tree and fruit.

Pruning should begin as soon as the trees have been planted by cutting back the young tree at the time of planting to the height from the ground it is proposed to start the branches to form the head of the tree, which should not be over 12 to 15 inches, as shown in figure 3. This cutting back will cause several of the upper buds to break and grow, thus starting the top or head at the proper height. The starting branches should be watched and only such left to grow as are to form the main branches. The strongest shoots should be left at equal distances apart around the stem and should tend obliquely outward so as to spread and make an open head. The second year these shoots should be shortened back to the extent of about half of the growth, as shown in figure 4. The same plan should be continued the third and fourth years.

In all pruning, to give the desired form to the head and especially while the tree is young, the orchardist should keep clearly fixed in his mind the form of the tree as it is to be when old; for what may seem to be an open head when the tree is young may prove to be too dense and crowded when the tree is older. The branches should not be too close together for convenience in gathering the fruit.

During late winter or in early spring before the sap starts, each tree should be carefully looked over

may be renewed by severe pruning, cutting back all the branches that are not in a healthy condition. This pruning will cause new, vigorous shoots to grow. The new growth will need to be cut back as occasion requires. By persistent pruning an entire new top may be formed in a few years.

When the removal of a large branch is necessary, the wound should be covered with grafting wax, paint, or some other substance that will prevent evaporation and keep the wood from checking and consequent decay.

The intermediate form is probably the best for training the pear. It is a compromise between the vase and the pyramidal forms and its outlines



Vase or Goblet Form of Top.

are not so conventional. The tree is allowed to grow more in accord with its natural habit, but it must be checked more or less in its growth so as to conform to the ideas of the planter. Different varieties of the pear vary greatly in their habits of growth. Some trees are upright and some are of a drooping habit. Both of these forms should be modified. Upright branches are shortened back and induced to spread out; and the limbs of the tree inclined to droop are encouraged to grow more nearly upright.

## RAISING BELGIAN HARES PROFITABLE

Care in Selection of Stock Is First  
Important Consideration  
in Starting in the  
Business.

The so-called Belgian hare is a domesticated form of the wild rabbit of Europe, being bred with reference to its value as a food animal, and its flesh is now generally considered better for food than that of the ordinary hutch rabbit.

Rabbits may be propagated without costly investment in land and buildings, and possess the further advantage that they contribute another animal to the farm stock that may be killed and prepared for the table at short notice. As a rule, the same treatment applies to all forms of rabbits, except the lop-eared variety, which require heated quarters in winter.

Care in the selection of stock is the first important consideration upon entering upon the raising of rabbits, and for the rest of the enterprise only observation and judgment are essential.

While not affording large profits, the raising of rabbits in a small way may be made interesting and fairly remunerative, as well as affording an agreeable change in the family diet where ordinary meats are high priced or difficult to obtain.

### Separate Ailing Chick.

At the first sign of drooping in a chick separate it from the rest of the flock and it does not quickly recover use the ax and burn the body

## CUCURBITS OR VINE CROPS

By GEORGE W. HOOD,  
Instructor in Horticulture,  
Michigan Agricultural College

The cucurbits, taken as a class, probably include some of our most important vegetables. They belong to the class known as annual vegetables and to the sub-class which are grown for their fruit and seed parts. This group includes the following vegetables, namely, cucumber, gherkin, muskmelon, pumpkin, squash and watermelon. The cucumber and muskmelon are the most important, although cucumbers probably stand first.

These vegetables, taken as a whole, are known as "tender plants" and require a warm climate and must be planted at the time of season when all danger of frost is past.

### Cucumber.

The cucumber, which is one of our oldest vegetables, has been cultivated in India for at least three thousand years. It was first grown in England about 1673 and also by the earliest settlers in this country. The cucumber is grown commercially on a large scale and under a large range of climatic conditions. The various sections of the south and along the Atlantic coast are favorable to the production of the early crops while the cooler summers of the north are well adapted to growing pickles. The plants are quite sensitive to frost as well as to extreme heat, but thrive under cooler conditions than melons. The light sandy soils are best for early crops, if earliness is the chief consideration, however, yields are larger and the bearing period longer in heavy soils. As earliness is such an important factor in securing remunerative prices, many growers start some of their plants under glass. Greenhouses are most valuable for this purpose although hot beds and cold frames are sometimes employed. The soil should receive early plowing and frequent harrowing before planting, and for a very early crop some growers prefer to throw up the land in small furrows thus securing better drainage and somewhat warmer soil conditions. Frequent cultivation until the vines begin to run is recommended.

The most important type that is grown in this country and which is especially desirable for slicing is the White Spine. This is quite popular both for cultivation in the open and under glass. The cucumber, like many other of our vegetables, is not without its insect enemies and diseases. Among the most important insect enemies may be mentioned the striped cucumber beetle which is yellow above, with black head and wing covers longitudinally striped with black. The beetles are particularly destructive to young plants but also feed on the old plants as well as the fruit. Various plans have been suggested for the control of this pest, but arsenical poisons are not successful and preventative measures are usually employed, such as protecting the hills with square boxes covered with cheese cloth or muslin.

The most important diseases of the cucumber are the downy mildew, leaf blight, and anthracnose. Bordeaux mixture is the chief fungicide used in combating these diseases.

Muskmelon requires somewhat the same conditions recommended for the cucumber. It is a native of southern Asia and is one of the most popular vegetables in many parts of the world. The muskmelon is much more susceptible to the effects of cold than the cucumber. It will not stand frosts and demands a rather high summer temperature for most satisfactory results. A good plan, especially for this section of the country, is to start melons under glass in order that they may have a longer growing season so as to mature their crops earlier. It is generally conceded that the sowing should not occur more than four weeks before setting in the field, because the plants may become stunted or the growing may be checked when transferred to the field. Occasionally plants are kept under glass six weeks. Paper, earthen pots, berry baskets and veneer boxes are used to start the plants.

Cultivation, care and soil requirements are similar to those recommended for cucumbers. The other members of this group require similar conditions with slight modifications for each individual crop.

### Profit on One Tree.

The wonders of spraying are forcibly demonstrated in the case of a woman at Salem, W. Va., who told one of the instructors of the extension division how last year she had been induced to purchase a small spraying outfit for spraying a tree in her yard that had yielded practically no apples for several years. The neighbors thought the idea absurd and laughed at her, but she kept an accurate account of the vastly increased yield of the tree and she found she had cleared \$4.50 besides providing a surplus for a family of several members. When the profit accruing from a hundred or more trees from the use of these same methods is figured, it becomes interesting.

### Rape for Poultry.

Have you made any provision for green feed for hens this summer? If not, get busy and plant rape, which is one of the best of green feeds, and a small patch will serve the needs of many hens. It is a hardy plant, thriving in a great variety of soils, and it renews itself after each cutting.

## THE RIGHT WAY TO CULTIVATE CORN

By C. H. SPURWAY, Instructor in Soils,  
Michigan Agricultural College

A successful corn grower once said: "The best time to cultivate corn is before it is planted." He had in mind the proper fitting of the soil for the crop, rather than the cultivation which is usually given after the corn is seen in the row. Preparing a good seed bed is an important part of corn growing, but there are other things which must also be considered.

The best soil for corn is a deep, rich, sandy or silty loam. This does not mean, however, that corn cannot be grown on any other kind of soil. It means that the largest yields are obtained from this kind. Profitable yields can be had from many different kinds of soil providing proper care is taken to prepare the ground before seeding, and proper methods of cultivation are followed.

The secret of preparing a good seed bed is to plow early and work often. One can hardly plow too early in the spring, providing the soil is in the proper condition for plowing. If the corn is to follow sod, then the sod should not be left until it has a crop of hay on it and the hay turned under late in the season. Many fields have been ruined for the season by doing this. The growing hay takes out the water, and if the season is dry, the great bulk of material below the furrow slice will cause trouble. This injury is greatest on the heavier soils. After plowing, work the soil down good. Harrow not once or twice, but many times, and particularly after



Two Well-Cultivated Crops.

every heavy rain. This thorough working, together with the rains, will cause a good, firm seed bed to be established. The continuous harrowing will aerate the soil and make plant food available for the young plant. Before planting the corn, dig down into the soil to the depth of the furrow slice. If the soil is loose and open near the bottom of the furrow slice the seed bed has not been prepared properly. If it is firm and moist below, and dry and loose near the surface, then there is a good seed bed for corn, which is one of the first requisites for growing a profitable crop. The producing of such a seed bed is what the successful corn grower meant by saying that the best time to cultivate corn is before it is planted.

Good seed must be planted on this good seed bed, otherwise our careful work will be somewhat wasted.

Perhaps, for the most of us, the next thing of importance will be to get after the weeds. Here the weeder may be used to advantage on the lighter soils. The field is gone over once or twice so as to kill the weeds as soon as they have germinated from the seed. The best time to kill weeds is when they are small. It is worth while to get at them as soon as possible after they have germinated, and the first two or three cultivations count the most in this respect. After the plants appear in the rows, then the corn should be well cultivated with a good cultivator. On the heavier soils the spike-toothed harrow might take the place of the weeder, or the cultivator might be used from the first. If the corn cannot be seen in the rows, or the plants are small, put on the fenders to keep the plants from being covered with soil, and do a good job. Don't be afraid of cultivating too deep the first time over, and use a cultivator that is adapted to the soil. The deep cultivating will let air into the soil and hasten the decay of organic matter and the building up of plant food. As soon as the corn roots begin to spread between the rows, the cultivator should be run shallower, so as not to prune the roots too much and set the plants back in their growth. As far as the saving of moisture is concerned, two inches seem to be the most economical depth to cultivate after the first two or three times. If thistles or milkweeds bother, try the thistle sweeps. There are kinds found on the market which will do the work effectively. Keep the cultivators running in the fields until the corn is too high for the two-horse machines. After this, many still use the one-horse cultivator until the corn gets too big or the weather too hot to do effective work.

The vital things in the growing of a good crop of corn are summarized as follows: A good seed bed, good seed, thorough cultivation to kill the weeds, to save water and to aerate the soil.

## STATES AWAKING TO DANGER

Additional Hospital Beds for the  
Treatment of the Tuberculosis  
Are Being Established.

Nearly 4,000 additional hospital beds for consumptives in 29 states were provided during the year ending June 1, according to a statement issued by the National Association for the Study and Prevention of Tuberculosis. This makes a total of over 30,000 beds, but only about one for every ten indigent tuberculosis patients in this country.

In the last five years, the hospital provision for consumptives has increased from 14,428 in 1907, to over 30,000 in 1912, or over 100 per cent. New York state leads in the number of beds, having 8,350 on June 1; Massachusetts comes next with 2,800; and Pennsylvania, a close third with 2,700. Alabama showed the greatest percentage of increase in the last year by adding 57 new beds to its 42 a year ago. Georgia comes next with 109 beds added to 240 a year ago. New York has the greatest numerical increase, having provided over 1,800 additional beds in the year.

### WAS SORRY FOR HIM.



Janitor—Stop playing that trombone; the man in the next room says he can't read.

Dinkheimer—Ach, vot ignorance! I could read ven I vas five years old!

True to His Trust.

"Father," asked the beautiful girl, "did you bring home that material for my new skirt?"

"Yes."

"Where is it?"

"Let me see? Wait now. Don't be impatient! I didn't forget it. I'm sure I've got it in one of my pockets, somewhere."

A better thing than tooth powder to cleanse and whiten the teeth, remove tartar and prevent decay is a preparation called Paxtine Antiseptic. At druggists, 25c a box or sent postpaid on receipt of price by The Paxton Toilet Co., Boston, Mass.

### Getting Rid of It.

Tyres—I tell you the man who takes care of his own motor car has a good deal on his hands.

Byres—Well, soap is cheap.

### In the Suburbs.

"Is Mrs. Gillet a well-informed woman?"

"Well, she's on a party wire."—Life.

Be thrifty on little things like bluing. Don't accept water for bluing. Ask for Red Cross Ball Blue, the extra good value blue.

### Living Up to Its Name.

"How do people seem to like your new song, 'The Aeroplane'?"

"Just carried away by it."

### The Worrier.

Knicker—Does Jack worry?

Bocker—Yes; he wants to pasteurize split milk.—Judge.

Mrs. Winslow's Soothing Syrup for Children teething, softens the gums, reduces inflammation, allays pain, cures wind colic, 25c a bottle.

Even your best friends haven't time to do much worrying on your account.



## Satisfies

There never was a thirst that Coca-Cola couldn't satisfy. It goes straight as an arrow, to the dry spot. And besides this,

**Coca-Cola**

satisfies to a T the call for something purely delicious and deliciously pure—and wholesome.

Free Our new booklet, telling of Coca-Cola vindication at Chattanooga, for the asking.

Demand the Genuine as made by THE COCA-COLA CO. ATLANTA, GA.

Whenever you see an Arrow think of Coca-Cola.

W. N. U., DETROIT, NO. 29-1912.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.

When you see an Arrow think of Coca-Cola.